

5

**APPLICATION**

10

**FOR UNITED STATES LETTERS PATENT**

----

15

**SPECIFICATION**

20

TO ALL WHOM IT MAY CONCERN:

25 BE IT KNOWN THAT I, JORGE ANDRE, a citizen of UNITED  
STATES OF AMERICA, have invented a new and useful PORTABLY  
POWER TOOL AND POWER SUPPLY COMBINATION of which the  
following is a specification:

# PORTABLY POWER TOOL AND POWER SUPPLY COMBINATION

5

## BACKGROUND OF THE INVENTION

### Field of the Invention

10

The present invention relates to portable power tool devices and more particularly pertains to a new portable power tool device that includes a portable power supply which is connected to a power tool via a power cord so that both the weight and size of the power tool is reduced.

15

### Description of the Prior Art

20

The use of portable power tool devices is known in the prior art. While these devices fulfill their respective, particular objectives and requirements, the need remains for a power drill assembly which is smaller and lighter for easier use and for reaching narrow areas.

## SUMMARY OF THE INVENTION

25

30

The present invention meets the needs presented above by generally including an electrically powered drill assembly having a first power port electrically coupled thereto. A housing has a bottom wall, a top wall and a peripheral wall extending between and is attached to the top and bottom walls. The top wall has a well extending therein. A rechargeable battery is provided. A plurality of electrical contacts includes at least a pair of first electrical contacts mounted in the well and at least a pair of second electrical contacts mounted on and electrically coupled to the battery. The

second electrical contacts are removably positionable in the well and positioned for electrically engaging the first electrical contacts. A second power port is mounted on the housing and is electrically coupled to the first electrical contacts. A power cord is elongated and includes a first  
5 end and a second end. A pair of power couplers each adapted for electrically coupling to one of the first and second power ports is electrically coupled to one of the first and second ends of the power cord.

There has thus been outlined, rather broadly, the more important  
10 features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto.

15 The objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

## 20 **BRIEF DESCRIPTION OF THE DRAWINGS**

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference  
25 to the annexed drawings wherein:

Figure 1 is a schematic side view of a portably power tool and power supply combination according to the present invention.

30 Figure 2 is a schematic perspective front view of the battery and housing of the present invention.

Figure 3 is a schematic perspective back view of battery and housing the present invention.

Figure 4 is a schematic side view of the drill assembly of the present invention.

Figure 5 is a schematic perspective view of the a second embodiment of the drill assembly of the present invention.

Figure 6 is a schematic perspective view of a power cord of the present invention.

Figure 7 is a schematic broken view of the drill assembly of Figure 4 of the present invention.

Figure 8 is a schematic perspective view of a battery charger of the present invention.

Figure 9 is an electrical schematic view of the drill assembly of the present invention.

## **DESCRIPTION OF THE PREFERRED EMBODIMENT**

With reference now to the drawings, and in particular to Figures 1 through 9 thereof, a new portable power tool device embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

As best illustrated in Figures 1 through 9, the portably power tool and power supply combination 10 generally comprises an electrically powered drill assembly 12. A first power port 14 is electrically coupled to the drill assembly 12. The drill assembly 12 preferably has an elongated and tubular shape and includes a first end 16 and a second end 18. The

drill assembly 12 has a break 20 therein such that first 22 and second 24 portions are defined. The first 22 and second 24 portions are pivotally coupled together. The first power port 14 is mounted on the first end 16. A drill bit engaging member 26 is mounted on the second end 18. A

5 second embodiment 28 of the drill assembly is depicted in Figure 5 and includes a conventional handle 70 attached to the drill housing 72. The drill assembly 12 includes a motor 74 mechanically coupled to the drill bit engaging member 26 and an actuator 76 for selectively turning the motor 34 on or off.

10

A housing 30 has a bottom wall 32, a top wall 34 and a peripheral wall 36 extending between and is attached to the top 34 and bottom 32 walls. The top wall 34 has a well 38 extending therein. A rechargeable battery 40 is provided. A plurality of electrical contacts 42, 44 is mounted  
15 on the battery 40 and in the well 38. The plurality of electrical contacts includes at least a pair of first electrical contacts 42 that are mounted in the well 38 and at least a pair of second electrical contacts 44 is mounted on and electrically coupled to the battery 40. The second electrical  
20 contacts 44 are removably positionable in the well 38 and positioned for electrically engaging the first electrical contacts 42 when positioned within the well 38. A second power port 46 is mounted on the housing 30 and is electrically coupled to the first electrical contacts 42. Preferably, an actuator 48 is electrically coupled to the second power port 46 for  
25 selectively opening or closing a connection between the second power port 46 and the first electrical contacts 42. A power cord 50 is elongated and includes a first end and a second end. A pair of power couplers 52 is provided and each is adapted for electrically coupling to one of the first 14 and second 46 power ports. Each of the power couplers 52 is electrically coupled to one of the first and second ends of the power cord 50.

30

A belt clip 54 is attached to the peripheral wall 36 of the housing 30. The belt clip 54 is conventional and mounted generally adjacent to the top wall 34. The peripheral wall 36 includes a plurality of side walls and it is preferred that the belt clip 54 is attached to a different side wall than the second power port 46 and the actuator 48. The combination 10 may also include a conventional belt 56 to which the belt clip 54 may be attached.

Also included may be a battery charger 58 for recharging the battery 40. The battery charger 58 includes a well 60 for receiving the second electrical contacts 44 for electrically coupling the battery charger 58 to the battery 40. It is preferred that the battery charger 58 includes an indication system for indicating when the battery is fully charged.

In use, the drill assembly 12 is used as a conventional power drill. By placing the power supply, or battery 40, on the belt of the user of the drill assembly 12, the user is provided with a more streamlined and lighter drill assembly 12 while having the power of a conventional cordless drill.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and

described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.